

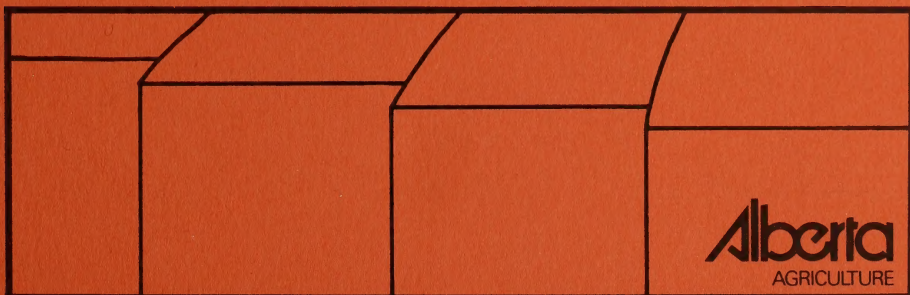
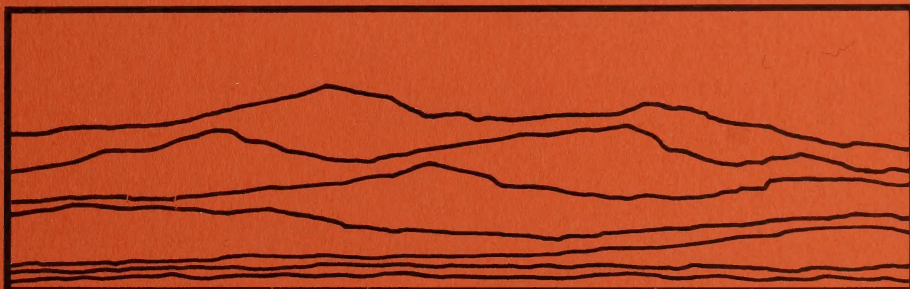
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AGRICULTURAL SMALLHOLDINGS STUDY:

LAND USE IMPLICATIONS



Alberta
AGRICULTURE

Land Use Branch



AGRICULTURAL SMALLHOLDINGS STUDY:

LAND USE IMPLICATIONS

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May, 1987

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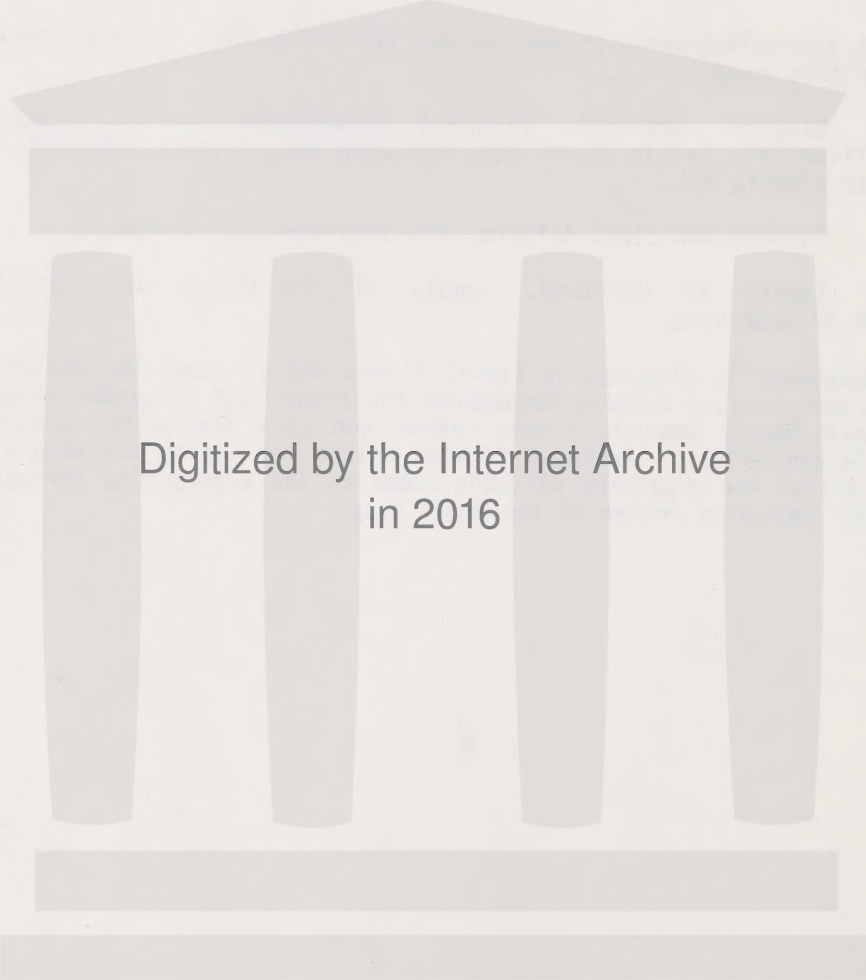
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I. INTRODUCTION

Historically, the quarter section has been the minimum parcel size for agriculture activities in Alberta. Today, there is an increasing demand for the subdivision of quarter sections into smaller agricultural parcels. Smallholdings, parcels 20 to 80 acres in size, are intended for extensive and intensive agriculture or small scale agricultural pursuits, usually in association with country residences.

Past studies indicate smallholdings have negative impacts on agriculture. Miller (1980) showed non-agricultural related land uses begin to occur more frequently on parcels of land 20 acres or less in size. Hanus (1981) found that on a per acre basis the average market value of 80 acre parcels in the M.D. of Sturgeon was 52 percent higher than quarter sections.

Rural planners have taken opposing views on the agricultural impacts of smallholdings. One view is that small agricultural holdings become large residential lots; thus, effectively removing land from production. Opposite views suggest that smallholdings are ideal for accommodating small scale agricultural pursuits, or are farmed more intensively producing more per acre than larger farms. Present regional and municipal subdivision policies regarding creation of small agricultural holdings reflect these different views. While many municipalities allow smallholdings, the most common being 80 acre parcels, the majority of regional and municipal planning documents are more restrictive supporting the position that except for intensive agricultural operations, the quarter section is the parcel size that best accommodates Alberta's typical extensive cropping and grazing practices.

The absence of substantive research regarding the impacts of agricultural smallholdings leaves restrictive regional and municipal rural subdivision policies open to question. Public and political pressures are being exerted for policy changes allowing subdivision of quarter sections into smallholdings.

The study's goal was to document the impacts of smallholdings on agricultural land use for the purpose of evaluating regional and municipal rural subdivision policies which favor the quarter section as the minimum parcel size for extensive agriculture. More specifically, the objectives were:

- 1) To determine if smallholdings are located within proximity to major urban centers.
- 2) To determine the quality of agricultural land subdivided into smallholdings.
- 3) To determine current ground cover and land use on smallholdings.
- 4) To assess if there has been a change in ground cover since the time of subdivision.
- 5) To determine if there is a threshold parcel size below which land is seldom used productively.

II. METHODS

To accomplish the study's objectives two phases of data collection were necessary: collection of subdivision application data from subdivision approving authorities and collection of current land use information through site inspections.

Subdivision application data was collected for smallholdings meeting the following criteria:

- 1) intended for agricultural use at the time of subdivision; including extensive agriculture, intensive agriculture, and small scale agricultural pursuits (hobby farms).
- 2) approximately 20 to 80 acres in size
- 3) registered with land titles in 1982 or earlier.

Data was collected for smallholdings registered from the mid to late 1970's through to 1982. This time frame was selected because of the availability of subdivision and land titles registration information and to allow for the omission of newly created smallholdings which may not have had an established long term use such as country residence or hobby farm.

The following subdivision data was gathered on individual parcels from files or registers in regional planning commission or municipal offices having subdivision approving authority:

- 1) legal description of location
- 2) year of land titles registration. If registration date was not available from commission or municipal offices it was acquired from Municipal Affairs Land Titles Changes Listings.
- 3) size of parcel (acres)
- 4) primary ground cover at time of subdivision
- 5) dominant Canada Land Inventory (CLI) rating for agricultural capability available on a parcel specific or quarter section basis. Canada Land Inventory groups mineral soils into seven classes according to their potential and limitations for growing agricultural crops. The CLI system is based on climate, soil and landscape limitations and the degree of those limitations. Soils rated 1 through 3 are considered arable agricultural lands. These soils have the highest capability for sustained annual production of cultivated crops. Class 4 soils have serious limitations for cereal

crop production and are considered to be potentially arable. Non-arable lands rated 5 through 7 by CLI are only capable of producing natural or tame perennial forage crops or pasture, or have no agricultural capability.

Individual site inspections were carried out for those smallholdings identified in the subdivision data collection phase. Site inspections were completed by Alberta Agriculture staff in 1986. In addition, site inspections for smallholdings in the Municipal Districts of Foothills and Rockyview (20 acre smallholdings only) were completed by the Calgary Regional Planning Commission in 1985. Three types of land use information were collected for each smallholding:

- 1) primary ground cover - primary type of vegetation on the parcel such as crop, forest or improved and unimproved pasture.
- 2) dominant use - the primary purpose for which the lot is used. For example, residence, extensive agriculture, or commercial/industrial.
- 3) accessory use - a use which is subordinate or incidental to the principal use on the same lot. For example, residence, hobby farm, market garden, or horse stables.

Data Collection was confined to eleven rural municipalities in Alberta. Municipalities were selected on the basis of past or present municipal policies allowing the creation of smallholdings, regional location within the province and proximity to major urban centres. Municipalities within the study area include:

County of St. Paul No. 19	North East Alberta
County of Athabasca No. 12	
County of Strathcona No. 20	proximity to Edmonton
County of Parkland No. 31	
M.D. of Rockyview No. 44	proximity to Calgary
M.D. of Foothills No. 31	
County of Red Deer No. 23	Central Alberta
County of Wetaskiwin No. 10	
M.D. of Cardston No. 6	Southern Alberta
County of Newell No. 4	
M.D. of Cypress No. 1	

A provincial map highlighting the municipalities is shown in Figure 1. A review of current municipal maps and bylaws from the Peace River region indicated limited small agricultural holding activity. Therefore, this region is not represented in the study area.



Figure 1
Study Area

III. RESULTS

Preliminary Data Analysis

Subdivision application data and current land use information was collected for 988 smallholdings. Within this sample, parcel size varied from 12 to 85 acres and twenty-three different current land uses were identified. Current land use being a combination of primary ground cover and dominant land use. For purposes of analysis the 988 cases were screened to produce a more representative data base. There are 735 cases in the data base (75 percent of the sample). Within this data base three ranges of parcel sizes were identified:

Parcel Size	Number of Cases
17-22 acres (20 acres)	345
38-40 acres (40 acres)	116
77-81 acres (80 acres)	274
	<u>735</u>

and six different current land uses (primary ground cover/dominant use):

- 1) crop/extensive agriculture (ext. ag.) - the smallholding is used predominantly for the raising of crops including grains, oilseeds, or hay or for summerfallow.
- 2) pasture/extensive agriculture - the smallholding is used predominantly for grazing of livestock on improved or unimproved pasture.
- 3) crop/residence (res.) - a major portion of the smallholding is covered by either a crop, pasture or forest with the dominant use being
- 4) pasture/residence - country residential living as indicated by a home and the absence of grain bins, barns, corrals, and
- 5) forest/residence - farm equipment in the yard.
- 6) forest/no dominant use - the smallholding has a forest cover with no dominant land use evident such as extensive agriculture (grazing) or country residential living.

In the screening process intensive agriculture as a dominant use was discarded. Less than 2 percent of the 988 cases in the sample had intensive agriculture as a dominant use.

The following analysis focuses on the 735 case data base at a provincial level. The 20, 40 and 80 acre size groups are discussed independently. Location, agricultural capability, current land use, and ground cover change following subdivision are addressed in each size group.

Provincial Analysis

20 Acre Smallholdings

1. Location - Results show over 90 percent of the 20 acre parcels are found in proximity to Calgary, of which one-third are located within the urban fringe. A general municipal plan and bylaw review completed in 1983 and updated in 1987 indicates municipalities surrounding Calgary support or have supported 20 acre agricultural subdivisions. Edmonton area municipalities also support this type of subdivision, but to a lesser extent. The remaining municipalities within the study area do not favor 20 acre subdivisions. Table 1 indicates the distribution of 20 acre smallholdings by study area regions.

Table 1
Location of 20 Acre Smallholdings

Region	Number of Cases	Percent	Percent within Urban Fringe ¹
North East	--	--	--
Proximity to Edmonton	22	6	23
Proximity to Calgary	318	92	31
Central	3	1	--
Southern	2	1	--
Total	345	100	--

¹ The urban fringe is defined as a 5 mile radius around Calgary and Edmonton.

2. Agricultural Capability - Results indicate the majority of 20 acre parcels are located on agricultural soils with 55 percent located on arable CLI class 1 through 3 soils and 6 percent located on potentially arable class 4 soils. The predominance of these parcels on agricultural lands is expected given their agricultural intent. With this intent in mind planners are not likely to relegate these parcels to the non-arable class 5 and 6 lands. The agricultural capability of 20 acre smallholdings is presented in Table 2.

Table 2
Agricultural Capability of 20 Acre Smallholdings

Canada Land Inventory	Number of Cases	Percent
1-3	190	55
4	21	6
Subtotal	211	61
5-6	134	39
Total	345	100

3. Current Land Use - The predominant current land use on 20 acre parcels is country residence with pasture cover. This land use category represents 57 percent of the parcels and has a major influence on the overall distribution of dominant land use and ground cover on 20 acre parcels. Overall, 78 percent of the parcels are used for residential living with extensive agricultural uses predominating on only 19 percent of the parcels. Sixty-six percent of the parcels have a pasture cover compared to 21 percent with a crop cover and 13 percent with a forest cover.

Of the 78 percent smallholdings having a dominant country residential use, approximately half have no accessory land uses while the remaining half have associated small scale agricultural pursuits. These Hobby farms are indicated by corrals and small barns for the keeping of small numbers of livestock, usually horses, or by the presence of chicken coups, gardens, and greenhouses. Excluded are market gardens, tree/sod farms, fur farms, kennels, and horse stables which rear horses for riding, training and breeding purposes. Table 3 indicates the current land use on 20 acre smallholdings.

Table 3
Current Land Use on 20 Acre Smallholdings

Current Land Use Ground Cover/ Dominant Use	Number of Cases	Percent	Percent by Ground Cover	Percent by Dominant Use
Crop/Ext.Ag.	35	10	Crop	21
Crop/Res.	38	11		
Pasture/Ext.Ag.	29	9	Pasture	66
Pasture/Res.	197	57		
Forest/Res.	35	10	Forest	13
Forest/No Use	11	3		
Total	345	100		

The trend towards 20 acre smallholdings becoming large residential parcels can be attributed to the location and size of these parcels. Regardless of agricultural intent and soil quality, the size and proximity to Calgary allows these parcels to be used for residential purposes by urban employees. Although many 20 acre parcels were intended for small scale agricultural pursuits with residential development, Census of Agriculture (1986) data indicates that on a provincial basis 50 percent of 20 acre operations had farm sales of less than 2500 dollars per year. With agriculture taking a minor financial role, the residence often becomes the dominating use on the parcel.

The predominance of pasture cover on residential parcels can be attributed to the parcels location within the province and use. The Calgary area lies within the prairie region of the province where forest cover is uncommon. Regardless of associated hobby farms, residential parcels are not needed for financial returns; thus, maximizing production through the raising of crops is not necessary. Pasture is easy to maintain, keeps weeds down and site inspections revealed that most associated hobby farms utilize all or a portion of a pasture cover for livestock grazing.

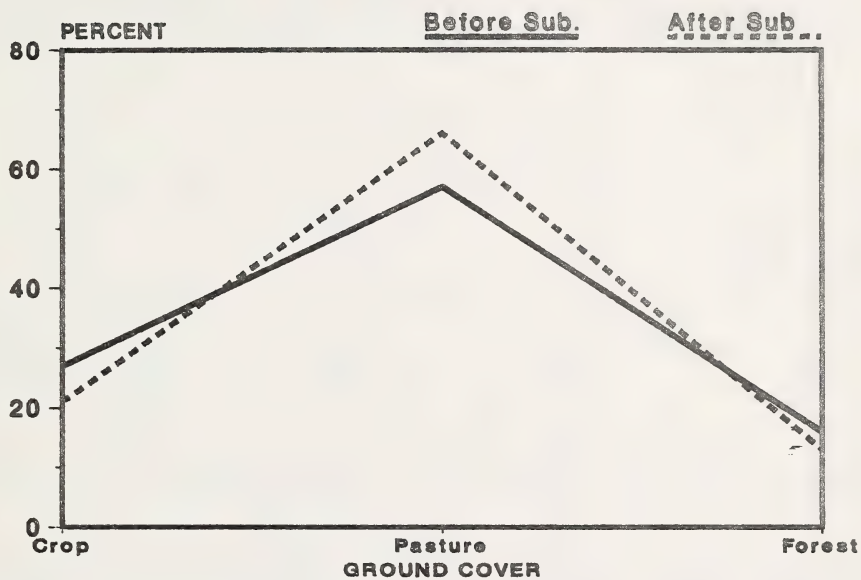
4. Ground Cover Change Following Subdivision.

The net changes in ground cover on 20 acre smallholdings following subdivision are:

	% Before Subdivision	% After Subdivision	% Net Change
Crop	27	21	-6
Pasture	57	66	+9
Forest	16	13	-3

Although the majority of 20 acre parcels occur on arable agricultural lands, over half of the parcels were in pasture production at the time of subdivision not crop production as expected. Thus, with 66 percent currently in pasture, results show little change in ground cover following subdivision. The low percentage crop cover at subdivision may be the result of resubdivision of non-agricultural 40 acre parcels or producers anticipating subdivision of land and subsequent selling. Producers are not likely to put in a crop for fear of losing money if the land is sold before harvest. Figure 2 illustrates the change in ground cover following subdivision.

**Figure 2 20 Acre Smallholdings
Ground Cover Change Following Subdivision**



40 Acre Smallholdings

1. Location - Results indicate 95 percent of the 40 acre parcels are located in proximity to Edmonton and Calgary. Less than a quarter of these parcels are located within the urban fringe. The general municipal plan and bylaw review shows municipalities surrounding Edmonton and Calgary allow this type of subdivision. The remaining municipalities within the study area do not favor 40 acre subdivisions. The distribution of 40 acre smallholdings by study area regions is shown in Table 4.

Table 4
Location of 40 Acre Smallholdings

Region	Number of Cases	Percent	Percent within Urban Fringe ¹
North East	--	--	--
Proximity to Edmonton	63	54	13
Proximity to Calgary	47	41	21
Central	4	3	--
Southern	2	2	--
Total	116	100	--

¹ The urban fringe is defined as a 5 mile radius around Calgary and Edmonton.

2. Agricultural Capability - Results show 40 acre parcels are predominantly located on agricultural soils with 36 percent located on arable CLI class 1 through 3 soils and 22 percent located on potentially arable class 4 soils. The agricultural capability of 40 acre smallholdings is presented in Table 5.

Table 5
Agricultural Capability of 40 Acre Smallholdings

Canada Land Inventory	Number of Cases	Percent
1-3	42	36
4	25	22
Subtotal	67	58
5-6	49	42
Total	116	100

3. Current Land Use - The six current land categories occur at approximately the same frequency on 40 acre parcels. This influences the overall distribution of dominant land use on these parcels. There is a trend towards residential use, however, the gap between residential use and extensive agricultural use is not wide with 53 percent of the parcels in residential use vs. 36 percent in agricultural use. Crop and pasture cover on agricultural parcels is evenly split and the distribution of crop, pasture and forest on residential parcels is similar.

Of the 53 percent smallholdings having a dominant residential use, a large majority have no accessory land use. Small scale agricultural pursuits are not common as an accessory use with less than one-quarter of the residential parcels having associated hobby farms. Table 6 shows the current land use on 40 acre smallholdings.

Table 6
Current Land Use on 40 Acre Smallholdings

Current Land Use Ground Cover/ Dominant Use	Number of Cases	Percent	Percent by Ground Cover		Percent by Dominant Use	
Crop/Ext.Ag.	21	18	Crop	37	Ext. Ag.	36
Crop/Res.	22	19				
Pasture/Ext.Ag.	21	18	Pasture	33	Res.	53
Pasture/Res.	17	15				
Forest/Res.	22	19	Forest	30	No use	11
Forest/No Use	13	11				
Total	116	100	100		100	

The proximity of 40 acre parcels to Calgary and Edmonton allows these parcels to be used for residential purposes by urban employees. Pasture cover is not the preferred ground cover on residential parcels due to the absence of associated hobby farms and the availability of a low maintenance, aesthetic forest cover. The majority of 40 acre parcels are located around Edmonton in the parkland region of the province. The occurrence of crop cover on one-third of the residential parcels may be the result of land rental to neighboring farmers. The even distribution of crop and pasture cover on agricultural 40 acre parcels reflects the agricultural capability of the parcels. Over forty percent of the agricultural parcels are located on arable soils. The remainder occur on potentially arable class 4 soils having serious limitations for cereal crops, and non-arable class 5 and 6 soils.

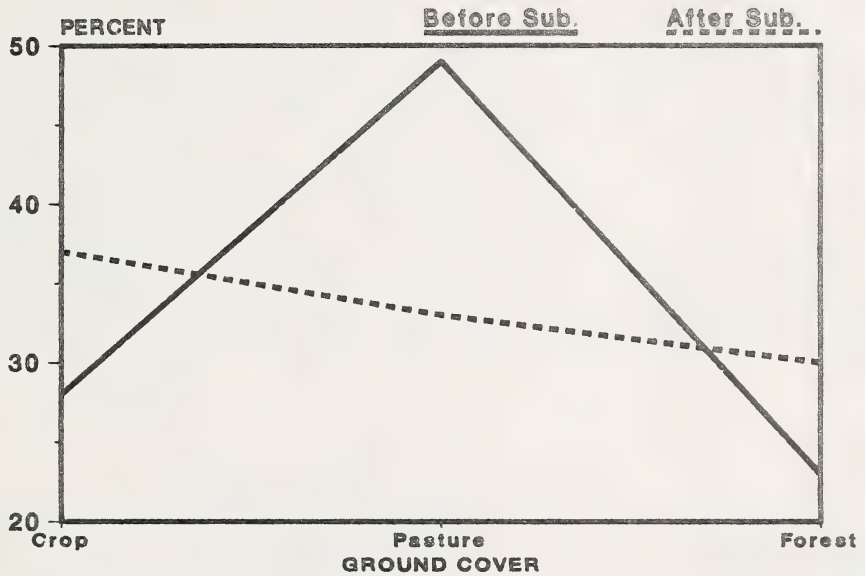
4. Ground Cover Change Following Subdivision

The net changes in ground cover on 40 acre smallholdings following subdivision are:

	% Before Subdivision	% After Subdivision	% Net Change
Crop	28	37	+9
Pasture	49	33	-16
Forest	23	30	+7

Results show 49 percent of the parcels were in pasture production at the time of subdivision. The even distribution of crop, pasture and forest following subdivision results in a 16 percent reduction in pasture and a 9 and 7 percent increase in crop and forest cover respectively. This reduction in pasture following subdivision occurred on parcels having a dominant residential use. Figure 3 indicates the change in ground cover following subdivision.

**Figure 3 40 Acre Smallholdings
Ground Cover Change Following Subdivision**



80 Acre Smallholdings

1. Location - All municipalities within the study area allow 80 acre subdivisions. Study results, however, show the majority of 80 acre parcels are located within two regions of Alberta. This skewed distribution is due to the study's selection criteria. Only those parcels registered with land titles from the mid to late 1970's through to 1982 are represented in the study. Thus, parcels created prior to the mid 1970's are excluded from the study, with most exclusions occurring in the Calgary, central and southern regions of the province. Results show forty-four percent of the parcels are located in the north east region and 36 percent within proximity to Edmonton. The remaining 20 percent are located in the central and southern regions and within proximity to Calgary of which none are located in the urban fringe. The 36 percent located in proximity to Edmonton is misleading to some extent. The majority of the parcels in the Edmonton area are located in the County of Parkland, a large municipality stretching southwest of Edmonton past Drayton Valley. Most 80 acre parcels in this county are located in the west and southwest portion away from Edmonton. Only 16 percent of the parcels in the Edmonton area are found within the urban fringe. Table 7 indicates the distribution of 80 acre smallholdings by study area regions.

Table 7
Location of 80 Acre Smallholdings

Region	Number of Cases	Percent	Percent within Urban Fringe ¹
North East	120	44	--
Proximity to Edmonton	103	36	16
Proximity to Calgary	15	6	--
Central	15	6	--
Southern	21	8	--
Total	274	100	--

¹ The urban fringe is defined as a 5 mile radius around Edmonton and Calgary.

2. Agricultural Capability - Results show over 80 percent of the 80 acre parcels occur on arable or potentially arable lands. Forty-eight percent are located on arable CLI class 1 through 3 soils and 35 percent on potentially arable class 4 soils. Table 8 indicates the agricultural capability of 80 acre smallholdings.

Table 8
Agricultural Capability of 80 Acre Smallholdings

Canada Land Inventory	Number of Cases	Percent
1-3	131	48
4	95	35
Subtotal	226	83
5-6	48	17
Total	274	100

3. Current Land Use - The raising of crops in an extensive agricultural situation occurs on 44 percent of the 80 acre parcels. This predominating current land use has a major influence on the overall distribution of dominant use and ground cover. In total, 60 percent of the parcels are used for extensive agriculture. Only 18 percent of the parcels are used principally for country residential living and 22 percent have no dominant use. Fifty-one percent of the parcels have a crop cover compared to 30 percent with a forest cover and 19 percent with a pasture cover.

Of the 60 percent smallholdings having a dominant extensive agricultural use, approximately one-third have a farmsite as an accessory land use. Residential parcels, although uncommon, typically do not have associated hobby farms. Results indicate less than one-quarter have this associated use. Current land use on 80 acre parcels is illustrated in Table 9.

Table 9
Current Land Use on 80 Acre Smallholdings

Current Land Use Ground Cover/ Dominant Use	Number of Cases	Percent	Percent by Ground Cover		Percent by Dominant Use	
Crop/Ext.Ag.	120	44	Crop	51	Ext. Ag.	60
Crop/Res.	19	7				
Pasture/Ext.Ag.	45	17	Pasture	19	Res.	18
Pasture/Res.	6	2				
Forest/Res.	23	8	Forest	30	No use	22
Forest/No Use	61	22				
Total	274	100	100		100	

The predominance of extensive agricultural activities can be attributed to the location, size and intent of 80 acre parcels. These parcels are located in rural areas away from urban influences. Municipalities allowing 80 acre smallholdings regard this parcel size as the minimum for primary or extensive agriculture; intensive agriculture or small scale agricultural pursuits with residential development are not the intent. Crop production predominates over pasture production on agricultural parcels by a three to one margin. This reflects the agricultural capability of the land with 58 percent of the agricultural parcels located on arable class 1 through 3 soils, 28 percent on potentially arable class 4 soils and only 15 percent on non-arable class 5 and 6 lands.

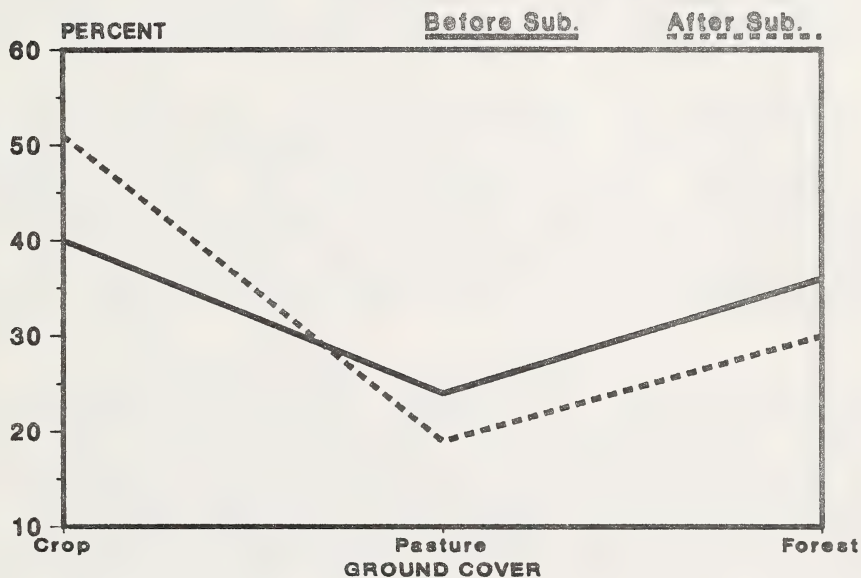
4. Ground Cover Change Following Subdivision

The net changes in ground cover on 80 acre smallholdings following subdivision are:

	% Before Subdivision	% After Subdivision	% Net Change
Crop	40	51	+11
Pasture	24	19	-5
Forest	36	30	-6

Although close to 50 percent of the parcels are located on arable agricultural lands, the distribution of crop and forest were similar at the time of subdivision. Given the predominating crop cover following subdivision, results show an increase in crop cover by 11 percent and reductions in both pasture and forest cover by 5 and 6 percent respectively. Ground cover change following subdivision is illustrated in Figure 4.

**Figure 4 80 Acre Smallholdings
Ground Cover Change Following Subdivision**



IV SUMMARY

The Agricultural Smallholdings Study reveals a significant trend towards country residential uses as parcels decrease in size from 80 to 20 acres. While 80 acre parcels are used effectively for agricultural pursuits, the use of 40 and 20 acre parcels is often not consistent with their intended agricultural use. Consequently, 40 and 20 acre subdivisions fragment the agricultural land base and result in non-agricultural related uses on quality agricultural soils.

Study results show the agricultural quality of smallholdings is relatively similar regardless of parcel size. Consistent with the agricultural intent of smallholdings, the majority are located on arable and potentially arable CLI class 1 through 4 soils. This majority is 83 percent for 80 acre parcels and 58 and 61 percent for 40 and 20 acre parcels respectively. Approximately half of the 80 and 20 and one-third of the 40 acre parcels are located on arable class 1 through 3 soils. Arable soils have the highest capability for sustained annual production of cultivated crops.

Based on the agricultural capability of smallholdings, results indicate an under-utilization of 40 and 20 acre parcels for agricultural pursuits. Figures 5 and 6 summarize current land use on smallholdings. Figure 5 shows a significant trend away from extensive agricultural use to a country residential use as smallholdings decrease in size from 80 to 20 acres. This trend indicates a shift towards non-agricultural related land uses as parcel size decreases. Intensive agriculture, one intended use of the smaller parcels, occurs on less than 5 percent of the smallholdings. Results show 40 acre parcels to be transitional. Although residential use dominates on 40 acre parcels, unlike 80 and 20 acre parcels there is no large gap between extensive agriculture and residential use. As parcel sizes decrease there is a further significant trend towards small scale agricultural pursuits in association with residential parcels. These agricultural pursuits are a secondary use on the parcel and are in the form of recreational agriculture only, such as hobby farms. Hobby farms occur on approximately one-quarter of the residential 80 and 40 acre parcels and one-half of the residential 20 acre parcels. Recreational agriculture is not an efficient use of arable agricultural land.

As land use changes shift from extensive agriculture to residential use there is a corresponding shift away from crop production (Figure 6). Unlike extensive agricultural 80 acre parcels, maximizing production through the raising of crops is not required on residential parcels as the land is now in a consumptive use rather than a productive use. A pasture or forest cover is easy to maintain on residential parcels and associated hobby farms utilize pasture for grazing.

Figure 5
Dominant Use on Smallholdings

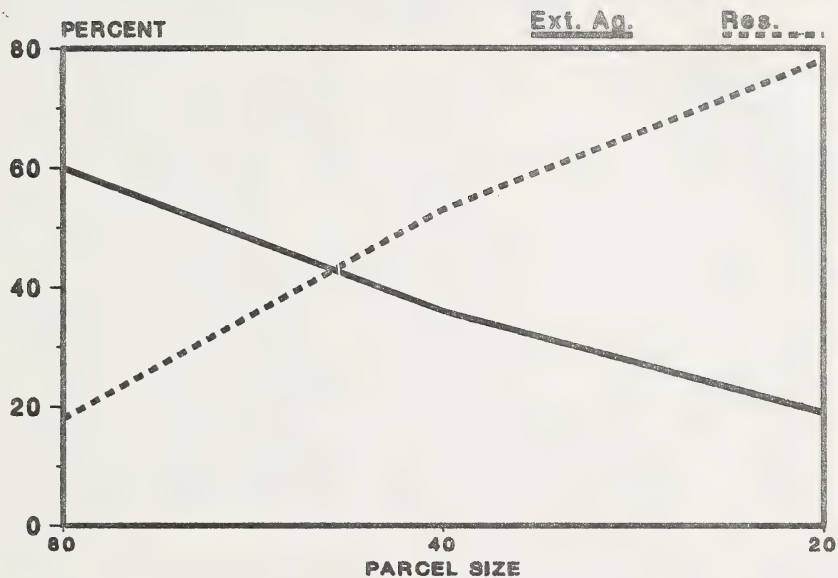
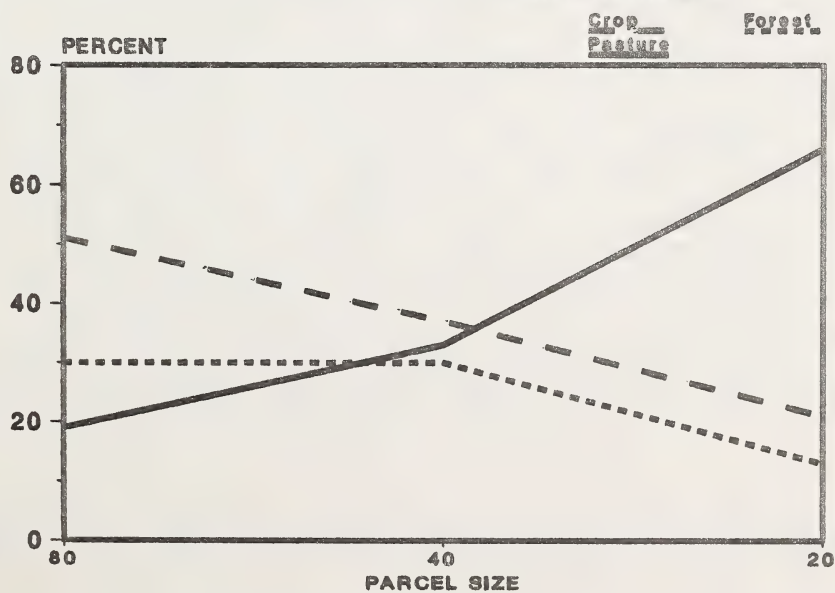


Figure 6
Ground Cover on Smallholdings



Forest, pasture and crop cover are all common on residential 40 acre parcels. The predominant location within the parkland region of the province accounts for the forest cover. A crop cover suggests land rental to neighbouring farmers. Pasture predominates on 20 acre residential parcels due to the presence of hobby farms and the parcels location within the prairie region of the province.

Study results indicate the frequency of smaller parcels increases as you move towards major urban centers. The majority of 80 acre parcels are located in rural regions of Alberta. These parcels are the most common smallholding in Alberta with approximately one-third of the municipalities allowing such subdivision including all municipalities within the study area. Within the study area, only those municipalities surrounding Calgary and Edmonton support 40 and 20 acre subdivisions. Over 95 percent of these parcels are located close to Calgary and Edmonton with one-quarter of the 40 acre and one-third of the 20 acre parcels located within the urban fringe. The proximity of 40 and 20 acre parcels to these two cities indicates a strong urban demand for parcels of this size. This urban influence has resulted in the majority of these parcels being used primarily for residential purposes regardless of the parcels high agricultural capability or agricultural intent at the time of subdivision. Urban employees do not require financial returns from their parcels and consequently the residence often becomes the dominating use of the parcel.

Parcels 40 and 20 acres in size are not used effectively for agricultural pursuits. They often become large residential parcels fragmenting the agricultural land base and removing quality agricultural land from production. Recreational agriculture, if present on these residential parcels, is an inefficient use of quality lands. If permitted, 40 and 20 acre subdivisions should be relegated to the lower capability agricultural lands. An exception being for intensive agricultural parcels. The continued agricultural use of 80 acre parcels following subdivision and the predominating residential use of the transitional 40 acre parcels indicates 80 acres is the minimum or threshold parcel size for extensive cropping and grazing practices. Eighty acres as a minimum parcel size for extensive agriculture, however, increases land values and may lead to increased land fragmentation and rural residences. These factors may negatively affect agriculture and should be taken into account before subdivision decisions are made. Provincially, land values per acre are approximately one-third higher for arable 80 acre parcels compared to arable quarter sections¹. However, 80 acre parcels have a lower total cost than quarter sections making them affordable to more people. Increased future fragmentation of the land base is a real possibility if quarter sections are split into 80 acre parcels. Presently, the Alberta Planning Board allows one developed 10 acre residential parcel per unsubdivided quarter section with an option open to municipal governments to allow for a residential parcel regardless of

¹ Appendix I illustrates the differences in regional and provincial land values per acre for arable and non-arable 80 acre parcels.

development. With an increased number of 80 acre parcels, there may eventually be a demand for one residential parcel per 80 acres. As such, this will increase fragmentation of the agricultural land base with the potential for four titles per quarter section: two 10 acre parcels and two 70 acre parcels. The resultant increase in rural residences may lead to increased potential conflicts between neighbours regarding nuisance from farming operations.

APPENDIX I

Real Estate Values

Comparative real estate values for 20, 40 and 80 acre smallholdings were not available and; therefore, omitted from the results section of this report. Land values for 20 and 40 acre parcels are unreliable for two reasons: 1) such parcel sizes are not included in Alberta Agriculture Production and Resource Economics Branch's definition of agricultural real estate and 2) building values were not separated from land values at the time of registration in the Land Titles offices. A high proportion of residential buildings on 20 and 40 acre parcels results in inflated real estate values for parcels of this size. The following discussion will compare real estate values for 80 and 160 acre parcels only.

Table A compares average agricultural real estate values per acre on a regional and provincial basis for arable and non-arable 80 and 160 acre parcels. Potentially arable CLI class 4 parcels are included with the arable CLI class 1 through 3 parcels. A provincial map highlighting the six regions of the province is shown in Figure A. The values reflect the actual selling price of the holdings registered by buyers and sellers in the Land Titles Offices between January 1, 1984 and December 31, 1986. However, based on Production and Resource Economics Branch's definition of agricultural real estate, 5 and 1500 dollars per acre limits were imposed on the original data. Thus, 160 and 80 acre parcels selling for less than 5 dollars per acre or more than 1500 dollars per acre were discarded. The Canada Land Inventory rating assigned to a parcel is that rating representing the largest percentage of the parcel.

Results show land values on a per acre basis are higher for 80 acre parcels than 160 acre parcels in all regions of the province regardless of CLI capability. Provincially, land values are 34 percent higher for arable 80 acre parcels compared to arable quarter sections. Differences vary from 17 percent in the north east region to 37 percent in the north west region. The difference in land values for 80 and 160 acres are greater when classified as non-arable. Provincially, land values are 43 percent higher for non-arable 80 acre parcels compared to non-arable quarter sections. Differences range from 31 percent in both the southern and north central regions to 69 percent in the Peace River region.

Table A

Regional and Provincial Average Value Per Acre For
Arable and Non-Arable 80 and 160 Acre Parcels

Region	Arable (CLI class 1-4)			Non-Arable (CLI class 5-7)		
	80 acres	160 acres	Percent Difference	80 acres	160 acres	Percent Difference
Southern	697.85	534.29	23	615.45	421.93	31
South Central	799.65	538.75	32	690.25	373.28	46
North Central	626.15	500.54	20	426.43	292.94	31
North East	444.36	368.73	17	438.55	222.73	49
North West	662.91	417.66	37	545.66	300.69	45
Peace River	347.25	262.11	25	688.71	212.92	69
Provincial Total	585.79	385.15	34	541.28	307.47	43

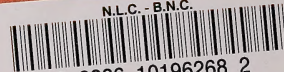


Figure A
Regions of Alberta

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